Watts.

06 October 2011

Our reference: PGL/TP/115579

Watts Group PLC

1 Great Tower Street
London EC3R 5AA

T: +44 (0)20 7280 8000
F: +44 (0)20 7280 8001
E: london@watts-int.com

Mr G. Simpson
Rolfe Judd Planning
Old Church Court
Claylands Road
The Oval
London
SW8 1NZ

Dear Mr Simpson

134a - 136 GLOUCESTER AVENUE, LONDON NW1 8JA
DAYLIGHT AND SUNLIGHT AMENITY

I refer to the proposals of Mr. Alex Bard for development works concerning the existing properties collectively comprising 134a-136 Gloucester Avenue, London. In this regard, I understand that Mr Bard is intending to submit an application for planning permission to the London Borough of Camden.

I have been commissioned to produce a daylight and sunlight amenity report to support the planning application and this letter comprises my formal report.

To assist in the assimilation of my findings and comments, my report is made under the separate headings that now follow.

1. INSTRUCTIONS AND BRIEF

Mr Bard, wishes to establish the effect that the proposed development will have on the daylight and sunlight amenity of properties that immediately surround the site. I have, more specifically, been instructed to:

- liaise with the appointed architectural designers to obtain an understanding of the proposed development.
- liaise with the appointed planning consultant to obtain an understanding of the particular requirements, if any, of the local planning authority in respect of daylight and sunlight advice.
- Inspect the property.
- Undertake any necessary technical assessment(s).
- prepare a formal report.

I have been made aware that my report will be presented to the local planning authority as part of the application documentation.

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2. THE PROPOSED DEVELOPMENT

I have liaised with the appointed architects, de Metz Forbes Knight Architects Limited (dMFK). They have provided me with comprehensive copies of the drawings listed in Table 1 below, which, I am informed, identify the proposed scheme.

Table 1 – dMFK Architects Application Drawings

Drawing number	Drawing revision	Drawing title
1763 - A90	-	Existing Site Plan
1763 - A91	-	Existing Ground Floor and First Plan
1763 - A92	-	Existing Ground Floor Survey
1763 - A93	-	Existing First Floor Survey
1763 - A94	-	Existing First Floor Survey
1763 - A95	-	Existing Sections AA
1763 - A96	-	Existing Sections BB
1763 - A97	-	Existing Sections CC
1763 - A98	-	Existing Sections DD
1763 - A99		Existing Sections EE & FF
1763 - A100	-	Proposed Site Plan
1763 - A101	-	Proposed Ground Floor Plan
1763 - A102	-	Proposed First Floor Plan
1763 - A103	-	Proposed Roof Plan
1763 - A150	-	Proposed Section AA
1763 - A151	-	Proposed Section BB
1763 - A152	-	Proposed Section CC
1763 - A153	-	Proposed Section DD
1763 - A154	-	Proposed Section EE & FF
1763 - A160	-	Existing and Proposed Gate

I note that the development will, in the main, re-use the existing two-storey building currently comprising the property to create a mixed-use scheme. It is evident from the drawings that he only changes to the shape and massing of the existing building will be:

i. The formation of a small additional ground floor commercial area at the rear of 140, 142 and 144 Gloucester Avenue.

ii. Raising slightly of the height of a gable end wall to a small section of the existing building facing 134 and 136 Gloucester Avenue.

iii. The creation of a small open courtyard, in lieu of a part of the existing structure, aligned with No 130 Gloucester Avenue.

iv. Removal of a steel staircase and landing that wraps round the central portion of the existing building.

Apart from these envelope alterations, the shape and massing of the existing building will remain as it currently is.

It is apparent from the architect's drawings that the application site takes the form of an irregular shaped plot of land laying between train lines to the north east, a terrace of properties to the west formed by 138 to 148 Gloucester Avenue and, to the south and east the terrace of properties formed by 128-134 Gloucester Avenue. It is accessed via two gated entrances off Gloucester Avenue which sit together between 133 and 138 Gloucester Avenue.

I also have reference to measured survey drawings for the rear fenestration of the buildings comprising 128 to 148 Gloucester Avenue. These were produced by Laser Surveys Ltd.

3. PLANNING AUTHORITY REQUIREMENTS

The local planning authority for the area in which the proposed development lies is London Borough of Camden. I have considered the planning policies of London Borough of Camden in connection with daylight and sunlight such as these are relevant to properties adjoining a development site. The planning authority's policies are now contained in the Local Development Framework (LDF), which replaced the authority's Unitary Development Plan in November 2010.

The Core Strategy document of the LDF sets out the key elements of Camden's overview for development in the borough. Core Policy CS5 concerns management of the impact and growth of development. It states that Camden will seek to:

> *"protect the amenity of Camden's residents and those working in and visiting the borough by:*
>
> *e) making sure that the impact of developments on their occupiers and neighbours is fully considered;*
> *f) seeking to ensure development contributes towards strong and successful communities by balancing the needs of development with the needs and characteristics of local areas and communities; and*
> *g) requiring mitigation measures where necessary."*

Development Policy DP26 states that Camden will protect the quality of life of occupiers and neighbours by only granting permission for development that does not cause harm to amenity. The factors it will consider include "*sunlight, daylight and artificial light levels*" among other matters. Paragraph 26.3 of the Development Policy document discusses daylight and sunlight. It states in its closing paragraph;

> *"To assess whether acceptable levels of daylight and sunlight are available to habitable spaces, the Council will take into account the standards recommended in the British Research Establishment's Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice (1991)."*

I have also taken account of the local planning authority's guidance on daylight and sunlight amenity set out in Camden Planning Guidance 6 (CPG6) section 6. This gives a basic explanation of the assessment methods recommended in BRE Report 209 and refers to Vertical Sky Components, Average Daylight Factors and Annual Probable Sunlight Hours, all of which I am familiar with from the

many reports that I have previously prepared pursuant to the recommendations and methodologies set out in BRE Report.

It is therefore necessary for me to consider the comments and recommendations contained in Building Research Establishment (BRE) Report 209, when deciding on the extent and nature of any technical analysis required to determine the adequacy of the levels of daylight and sunlight amenity.

The author of the BRE Report states, in the introduction:

> *"The guide is intended for building designers and their clients, consultants and planning officials. The advice given here is not mandatory and this document should not be seen as an instrument of planning policy. Its aim is to help rather than constrain the designer. Although it gives numerical guidelines, these should be interpreted flexibly because natural light is only one of many factors in site layout design……."*

Consequently, the local planning authority should be encouraged to put the results of my daylight and sunlight assessment and this report in context with all other planning considerations relating to the scheme and accord the degree of importance to my findings within the matrix of all other planning policy considerations relating to the proposed development.

In conclusion, the local planning authority will want to identify whether the proposed development will have the potential to reduce the levels of daylight and sunlight amenity of existing and future occupiers of buildings near to the development site.

4. SITE INSPECTION

To assist my understanding of the development proposed I have, in conjunction with preparation of this report, inspected the application site and surrounding areas externally. My inspection took place on Friday 16 September 2011.

Photographs, external measurements, and general information were recorded as necessary during my inspection. The nature, use and scale of the properties adjoining and surrounding the application site have been duly noted.

I note that the development site lies at a significantly lower level than the surrounding properties formed by 128-148 Gloucester Avenue. This is important when the impact of the proposed development on daylight and sunlight of these surrounding properties is being considered.

5. BUILDINGS NEAR DEVELOPMENT SITE

Having considered the nature of the proposed development and inspected the site, I am satisfied that, in the context of daylight and sunlight the properties in sufficiently close proximity to warranty closer study are those lying on the south and east side of the site as follows:

128 Gloucester Avenue 140 Gloucester Avenue

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130 Gloucester Avenue
132 Gloucester Avenue
134 Gloucester Avenue
136 Gloucester Avenue
138 Gloucester Avenue
142 Gloucester Avenue
144 Gloucester Avenue
146 Gloucester Avenue
148 Gloucester Avenue

These properties are generally 4 storey properties comprising a basement and ground floor storey with two upper floors above covered by a butterfly roof arrangement. Some properties have been provided with roof level extensions in the past to create a further (fifth) storey.

In respect of 134-148 Gloucester Avenue, the uses at basement and ground floor level are commercial (retail or office), not residential. Separate entrances give access to the upper residential parts of these properties. The three properties comprising 128; 130 and132 Gloucester Avenue appear to be residential in nature throughout.

Immediately to the north and east of the site, lies open land on which train lines/sidings exist.

6. ASSESSMENT METHODOLOGY

BRE Report 209, entitled "*Site Layout Planning for Daylight and Sunlight – a guide to good practice*" recommends in section 2.2 a method for assessing the effect, if any, on daylight enjoyed by individual windows of adjoining properties. Daylight amenity is measured using Vertical Sky Component (VSC) and Daylight Distribution (DD) values. Section 3.2 of the report gives recommendations for the assessment of the effect on sunlight enjoyed by individual windows. Sunlight amenity is measured in terms of Annual Probable Sunlight Hours (APSH).

I will not explain at length here the BRE assessment methodologies; Appendix 1 (Parts 1 and 2) of this letter sets out, in greater detail, the daylight and sunlight assessment methods that I have borne in mind in formulating my opinions and advice.

The following points are important to note:

1. The BRE Report recognises that that adequate daylight amenity might still be enjoyed by adjoining property even where VSC values for windows will be below 27% provided the new VSC value and DD value, derived after completion of a development, are no less that 0.8 times their former value preceding the development.

2. When considering sunlight, it should be noted that, in the northern hemisphere, it is only those windows that face within 90 degrees of due south that will enjoy significant amounts of sunlight and the BRE Reports limits the extent of assessments required to only these windows. Thus, the assessment of APSH is only necessary in respect of those windows in adjoining properties that face within 90 degrees of due south.

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7. OPINION AND COMMENTARY

7.1. Sunlight amenity

Concerning sunlight amenity, it is apparent from my site inspection, cartographic study and reference to internet aerial photography websites that the main bank of windows at the rear of the properties comprising 128 to 148 Gloucester Avenue do not face within 90 degrees of due south.

This being the case, BRE Report 209 would not advocate the production of a sunlight amenity study and I would not expect there to be any material effect on the sunlight amenity enjoyed by any of the rear areas within these adjoining properties. I would expect these properties to take in all of their sunlight via the elevations that overlook Gloucester Avenue itself from about mid-day onwards.

7.2. Daylight amenity

I have been provided with three cross-sectional studies by the project architects, dMFK. These are based on measured survey information, have been drawn to scale and to level and are as follows:

1763 DS.01 - *Daylighting Study Proposed Section A*.
1763 DS.02 - *Daylighting Study Proposed Section B*.
1763 DS.03 - *Daylighting Study Proposed Section C*.
1763 DS.04 - *25 Degree Daylighting Study of Proposed Gable*.

I attach these cross-sectional studies to this report.

I conclude, from the sections prepared, that the proposed development will not affect materially the current levels of daylight amenity enjoyed by any of the surrounding properties. In reaching this conclusion, have considered, in turn, the four building envelope changes noted in section 2 of this report. My comments and opinions in respect of each of these are as follows;

i. The formation of a small additional ground floor commercial area at the rear of 140, 142 and 144 Gloucester Avenue increases the massing and bulk of the property over a very limited section of the development site. There is already a boundary wall at the rear of 140 to 144 Gloucester Avenue. This will effectively increase in height by about 1.4 metres for a length of about metres 9.5 metres. However, drawing 1763 DS.03 - Daylighting Study Proposed Section C shows that, at ground floor level of the adjoining building, it is the edge of the flat roof over the first floor storey that controls the access of daylight and raising of the wall height by 1.4 metres will not alter this. At first floor level and above, the proposed wall extension will obviously have no effect on any of the adjoining properties. I have considered the effect on windows at basement level. The exact number and disposition of basement windows could not be definitively established from the vantage points available to me during my inspection, or from the design information provided to me. Notwithstanding this, if/where windows do exist, these will serve commercial areas within 140, 142 and 144 Gloucester

Avenue, possibly circulation areas, not residential parts. While there could, theoretically, be a detrimental effect on daylight amenity, this would affect a very small part of the adjoining properties and is unlikely to greatly affect the use and enjoyment, from day to day, of the space in nos. 140, 142 and 144 Gloucester Avenue.

ii. Concerning raising slightly of the height of a gable wall to a small section of the existing building, this gable wall is located directly in front of the main entrances to the property off Gloucester Road. Consequently, the first storey of occupied space directly facing this gable wall is located at first floor level, above the covered site entrances. Drawing 1763 DS.01 - *Daylighting Study Proposed Section A* – identifies the new structure proposed in respect of a raised gable wall and also shows that the apex of the gable terminates at the same level as the first floor window heads and does not approach the 25 degree test line superimposed on the drawings. Architects drawing 1763 DS.04 – 25 *Degree Daylighting Study of Proposed Gable* shows graphically in 3D the negligible nature of the additional obstruction that would be created to the 25 degree line drawn from the centre point of the relevant windows to surrounding properties.

iii. Concerning the proposed creation of a small open courtyard, opposite No 130 Gloucester Avenue, in lieu of a part of the existing structure, it is the parapet head to the first floor storey of the existing building that controls the access of daylight to 132 and 130 Gloucester Avenue, not the ground floor parapet. Therefore opening up a small courtyard area to the rear of 130 and 132 Gloucester Avenue, will have no detrimental effect

iv. Regarding the removal of a steel staircase and landing that wraps round the central portion of the existing building, this will neither increase nor decrease the access to daylight to any of the surrounding properties as it is not currently a controlling obstruction to daylight.

The cross sectional studies confirm that the envelope of the existing building is being changed very little and this means that there will be no change, or negligible change, in the VSC values, DD values and ADF values after completion of the development. Certainly, I believe any changes will fall comfortably within the 0.8 times reduction considered acceptable by BRE Report 209.

I have considered the need to undertake a full analysis of VSC, DD and ADF using 3D modelling techniques and specialist software. I do not consider that this would disclose results that cannot already be anticipated from the cross-sectional analyses already undertaken and those results would be very positive due the very minimal changes in building envelope proposed.

8. CONCLUSON

I conclude that the development will not have any effect on the levels of sunlight amenity enjoyed by any of the 11 properties comprising 128 to 148 Gloucester Avenue due to the compass orientation of the relevant windows serving these adjoining properties.

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It is also manifestly evident that the daylight amenity enjoyed by the same adjoining properties will not change noticeably as a result of the proposed development largely because the envelope of the existing building will be little different to the envelope of the proposed new building.

Consequently, and with development policy DP26 in mind, I believe that the proposed scheme will not injure the quality of life of occupiers and neighbours by causing harm to their daylight and sunlight amenity and there should not be any objection to the granting of consent on grounds of detrimental impact to the general daylight and sunlight amenity of the surrounding habitable properties.

Yours sincerely

PAUL LOVELOCK
Director
D: +44 (0)20 7280 8136
E: paul.lovelock@watts-int.com

For and on behalf of WATTS GROUP PLC

Enc. Appendix 1
dMFK Cross-sectional drawings

Appendix 1

Sunlight and Daylight amenity – assessment methodology

Part 1 of this Appendix explains the Assessment Methodology for daylight amenity in BRE Report 209 "Site Layout Planning for Daylight and Sunlight – a guide to good practice".

Part 2 of this appendix explains the Assessment Methodology for sunlight amenity in BRE Report 209 "Site Layout Planning for Daylight and Sunlight – a guide to good practice".

Appendix 1

Daylight and Sunlight amenity – assessment methodology

Part 1: Daylight amenity

Assessment numerical guidelines

In respect of properties adjoining a development site, and the potentially adverse effect of a development in close proximity, the BRE Report advises, in the summary to section 2.2:

> *"If any part of a building, or extension, measured in a vertical section perpendicular to a main window wall of an existing building, from the centre of the lowest window, subtends an angle of more than 25° to the horizontal, then the diffuse daylighting of the existing building may be adversely affected. This will be the case if either;*
>
> - *the vertical sky component measured at the centre of an existing main window is less than 27% and less than 0.8 times its former value;*
>
> *or*
>
> - *the area of the working plane in a room which can receive direct skylight is reduced to less than 0.8 times its former value."*

Daylight assessment methodology

The BRE Report advocates the assessment of daylight for all dwellings and any existing non-domestic building where the occupants have a reasonable expectation of daylight; this would normally include schools, hospitals, hotels, hostels, small workshops and most offices.

The BRE report goes on to say that:

> *"Windows to all bathrooms, toilets, storerooms, circulation areas, and garages need not be analysed."*

Accordingly, where we believe a window serves any of the aforementioned rooms or areas, we do NOT make an assessment of daylight amenity for that window.

The vertical sky component of a building's window does not vary with the orientation of that building, therefore orientation is not relevant in any daylight assessment.

From the daylight values cited above, three steps for assessing the effect of a development on daylight of adjoining properties can be derived.

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Step1: Subtending 25° angle

Appendix 1

Daylight and Sunlight amenity – assessment methodology

Firstly, it is necessary to consider whether the envelope of the proposed development subtends an angle of 25° to the horizontal, as measured in a vertical section perpendicular to a main window wall of each neighbouring building from the centre of each lowest window. This requires simple two-dimensional composite cross sections to be prepared through the proposed development and each of the neighbouring buildings. If the proposed new building does not subtend an angle of 25°, no further assessment is required for that particular neighbouring property. In addition, if the development does not subtend a greater angle than that of an existing building on the development site, no further assessment is necessary

However, Step 2 below applies if the proposed development does subtend the angle of 25°.

Step 2: Vertical Sky Component

For Step 2, a model of the buildings and structures presently on the development site and a CAD model of the proposed scheme and relevant surrounding buildings is created by computer and the Vertical Sky Component (VSC) is calculated using a two-dimensional Skylight Indicator contained in Appendix A of the BRE Report, or by bespoke computer software. Watts Group uses bespoke computer software however.

The Vertical Sky Component measures:

> *"the ratio of the direct sky illuminance falling on the vertical wall at a reference point, to the simultaneous horizontal illuminance under an unobstructed sky. The "Standard Overcast Sky" of the Commission Internationale de l'Eclairage (The international Commission on illuminance) is used and the ratio is usually expressed as a percentage. The maximum percentage value is almost 40% for a completely unobscured wall". (Report Page 3 para 2)*

Simply put, VSC quantifies the total amount of skylight available on the face of a building as measured at the centre of each main window and reference point for each window is the external plane of the window wall. Thus consideration of the VSC for each relevant window in each neighbouring property is required.

The target value for VSC used in the BRE Report is 27% (Report Page 1. section 2.2). The BRE Report does however recognise that it might be appropriate to use different target values to cater for varying locations. The introduction of the Report states;

> *"In special circumstances the developer or planning authority may wish to use different target values". (Report page 1, para 6)*

If the VSC for a window is less than 27% and is less than 0.8 times its former value, then the BRE numerical guidelines will not be satisfied.

Appendix 1

Daylight and Sunlight amenity – assessment methodology

Alternatively, if the Vertical Sky Component is less than 27%, but more than 0.8 times its former value then daylight levels might still be adequate to the neighbouring property, but Step 3 must then be applied.

Step 3: Daylight Distribution

The VSC value cannot take account of the size of the window being assessed, the size of the room it lights, or the fact that the room might receive light from more than one window in the same or different elevations. VSC results considered in isolation can give a misleading appreciation of impact on daylight amenity and it is important to consider the manner in which daylight is distributed within affected rooms. This is usually done by undertaking a daylight distribution assessment for each relevant room.

The BRE Report refers to the no-sky line method of assessment, but his produces a crude result and the BRE report indicates that the no-sky contour within a room is a more accurate assessment of distribution. The no-sky contour can be established using "manual" Waldram Diagram methods of assessment, but the software that is used by us to derive VSC values, will also accurately plot the no-sky contour within rooms.

Calculating the no-sky contour requires consideration at the horizontal "working plane", within a room, of the plan area receiving light directly from the sky. It involves the plotting, on plan, within each room of an adjoining property, the "no-sky" contour line at the working plane. This is the contour within a room, behind which no sky is visible from the room's window (or windows) at the working plane. After a development is complete, the area of a room with visible sky should, ideally, be 0.8 times or more of the former area on the working plane prior to the development. There is no absolute minimum area given by the BRE Report.

For Step 3, information regarding the internal layout and arrangement of rooms in each of the relevant neighbouring properties is required. In the absence of such information, sensible assumptions need to be made as to the layout. Use is made of the same computer model created for Step 2, but the model is extended to include rooms behind each of the assessed windows. Bespoke computer software is then able to plot the no-sky line in each room.

Average daylight factor

The Introduction of the BRE Report states that it is

> *"intended to be used in conjunction with the interior daylighting recommendations of the BS 8206: Part 2 and the Applications manual: window design of the Chartered Institute of Building Services Engineers (CIBSE). It complements them by providing advice on the planning of the external environment."*

Both of these other technical documents are still in existence and applicable at the time of preparing this report. Accordingly, it is important to bear in mind the nature of the recommendations given in

Appendix 1

Daylight and Sunlight amenity – assessment methodology

these two other documents, but particularly BS 8206: Part 2, when making an assessment of the affect of daylight and sunlight on adjoining property.

Where rooms will not satisfy the numerical guideline values for Vertical Sky Component and/or Daylight Distribution, it is helpful to present average daylight factor results, so that a comparison may be made with the recommendations in BS8206 *Lighting for Buildings - Part 2: Code of Practice for Daylighting*.

BS8206 advises that where supplementary (i.e. electric) lighting is provided in a building, the recommended minimum Average Daylight factor (ADF) in a new dwellings is:

- 1% for bedrooms,
- 1.5% for living rooms, and
- 2% for kitchens.

A more balanced understanding as to the acceptability of the impact on daylight amenity can be obtained by calculating ADF for properties adjoining a development.

Appendix 1

Daylight and Sunlight amenity – assessment methodology

Part 2: Sunlight amenity

Assessment numerical guidelines

In respect of internal rooms and spaces of properties adjoining a development site, and the potentially adverse effect of a development in close proximity, the BRE Report advises, in the Summary to section 3.2:

> *"If a room of an existing dwelling has a main window facing within 90 degrees of due south, and any part of a new development subtends an angle of more than 25 degrees to the horizontal, measured from the centre of the window in a vertical section perpendicular to the window, then the sunlighting of the existing dwelling may be adversely affected. This will be the case if a point at the centre of the window, in the plane of the inner window wall, receives in the year less than one quarter of the annual probable sunlight hours, including at least 5% of annual probable sunlight hours between 21 September and 21 March and less than 0.8 times its former sunlight hours during either period."*

The BRE Report further advises that the maximum number of probable sunlight hours available for the London Area would be 1486; for the Manchester area would be 1392; and for the Glasgow/Edinburgh area would be1267.

To summarise the BRE Report's guidance, sunlight availability to relevant windows is unlikely to be adversely affected if the three parameters below are satisfied:

1. the proposed development subtends an angle of less than 25° to the horizontal measured from the centre of the window, perpendicular on plan to the window, or

2. the proposed development subtends an angle of more than 25° to the horizontal measured from the centre of the window, but the window concerned still receives more than an quarter of the annual probable sunlight hours (including at least 5% of annual probable sunlight hours during winter months between 21 September and 21 March)

3. the proposed development subtends an angle of more than 25° to the horizontal measured from the centre of the window, and the window receives less than an quarter of the annual probable sunlight hours (and less than 5% of annual probable sunlight hours during winter months between 21 September and 21 March) BUT it still receives more than 0.8 times the former annual and winter values for sunlight hours

Appendix 1

Daylight and Sunlight amenity – assessment methodology

Sunlight assessment methodology

In the northern hemisphere the sun path from east to west takes a southerly (as opposed to a northerly) transit. The orientation of an adjoining building's windows is therefore relevant to any sunlight assessment.

Two-dimensional Sunlight Availability Indicators contained in Appendix A of the BRE Report are use in conjunction with plans for the scheme to calculate sunlight amenity. Bespoke computer software exists however and Watts Group uses this computer software to assess sunlight amenity.

From the objective values cited above for sunlight, it follows that a consideration of probable sunlight hours will only be required for a neighbouring property if all the following parameters apply:

1. the neighbouring property has windows overlooking the proposed development and
2. those overlooking windows face within 90 degrees of due south, and
3. the proposed development subtends an angle of more than 25° to the horizontal, measured from the centre of the window, perpendicular on plan to the window

date	rev	revisions
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This section is based upon measured survey information by Laser Surveys Ltd

N

DE METZ FORBES KNIGHT ARCHITECTS

the old library 119 cholmley gardens london nw6 1aa t 020 7435 1144 f 020 7435 0884 mail info@dmfk.co.uk

project: **134a - 136 GLOUCESTER AVENUE**

drawing title: DAYLIGHTING STUDY
PROPOSED SECTION A

client	scale at A1	scale at A3	drawn	date
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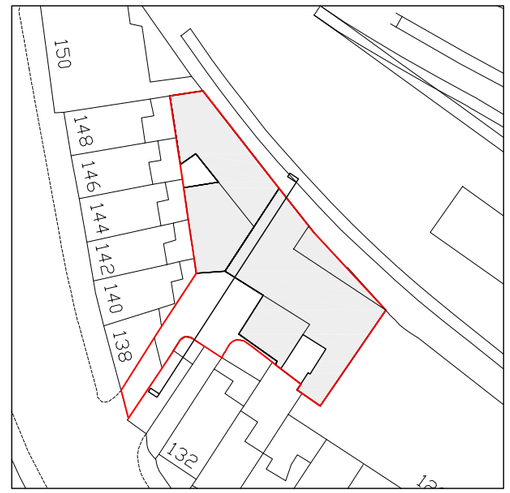
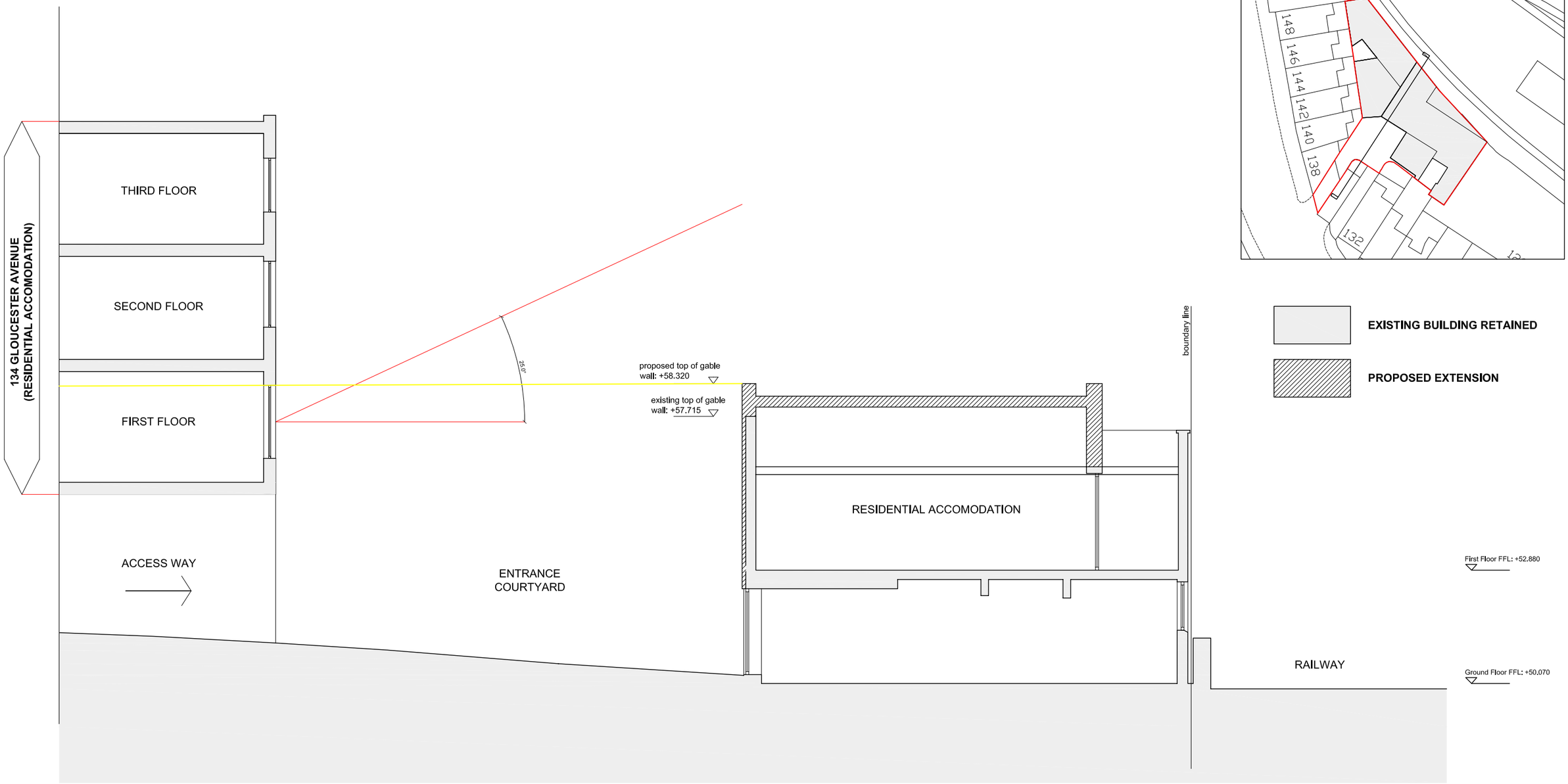
	project no.	drawing no.	revision	
	1763	DS 01	-	





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the old library 119 cholmley gardens london nw6 1aa t 020 7435 1144 f 020 7435 0884 mail info@dmfk.co.uk

project: **134a - 136 GLOUCESTER AVENUE**

drawing title: DAYLIGHTING STUDY PROPOSED SECTION B

client	scale at A1	scale at A3	drawn	date
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	project no.	drawing no.	revision	
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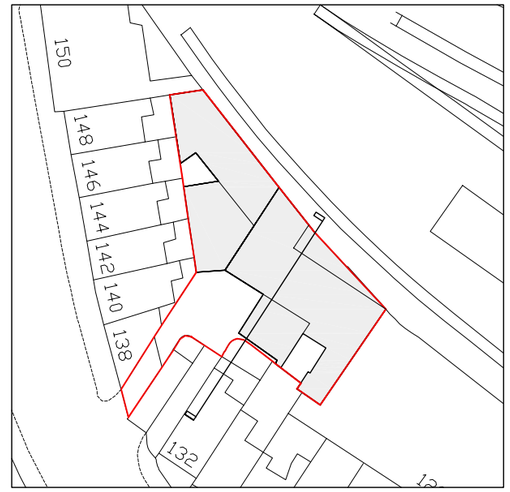

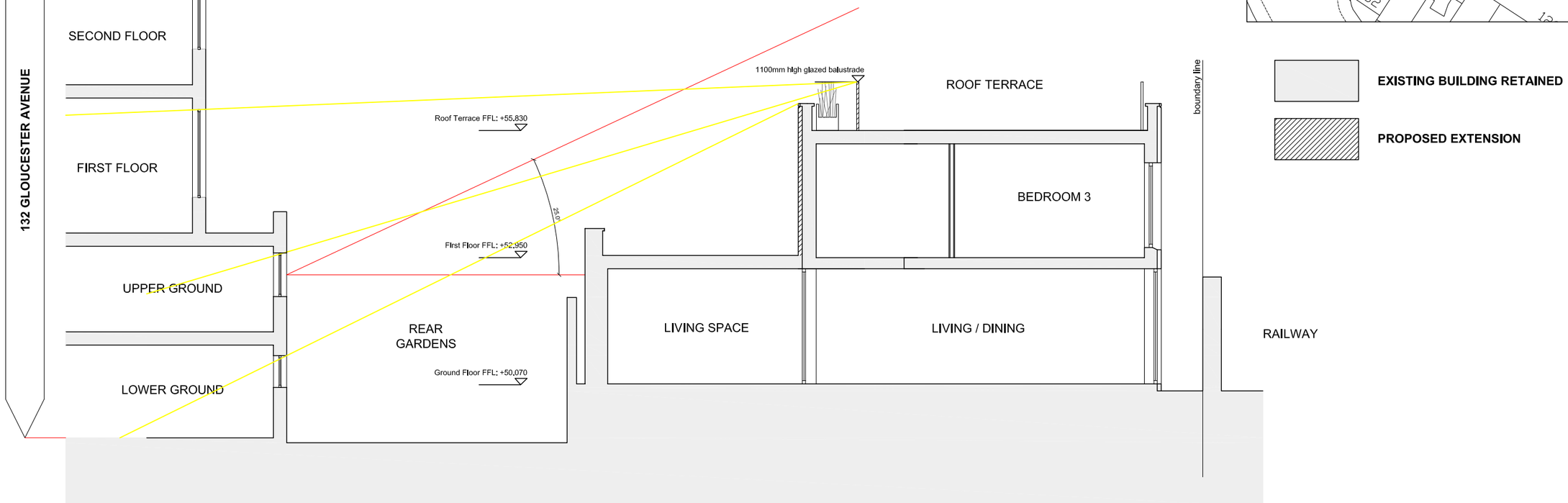

date	rev	revisions
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This section is based upon measured survey information by Laser Surveys Ltd

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DE METZ FORBES KNIGHT ARCHITECTS
the old library 119 cholmley gardens london nw6 1aa t 020 7435 1144 f 020 7435 0884 mail info@dmfk.co.uk

project: **134a - 136 GLOUCESTER AVENUE**

drawing title: DAYLIGHTING STUDY
PROPOSED SECTION C

client	scale at A1	scale at A3	drawn	date
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	project no.	drawing no.	revision	
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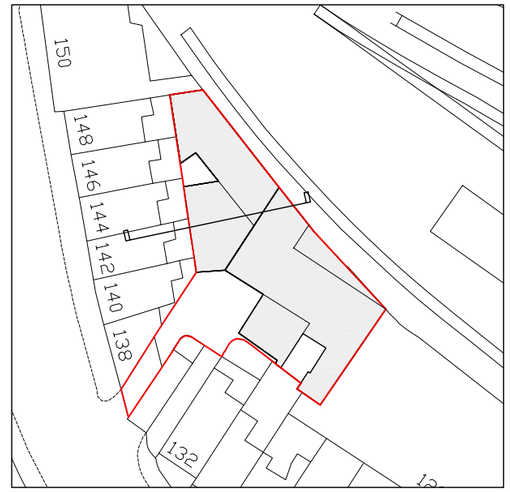

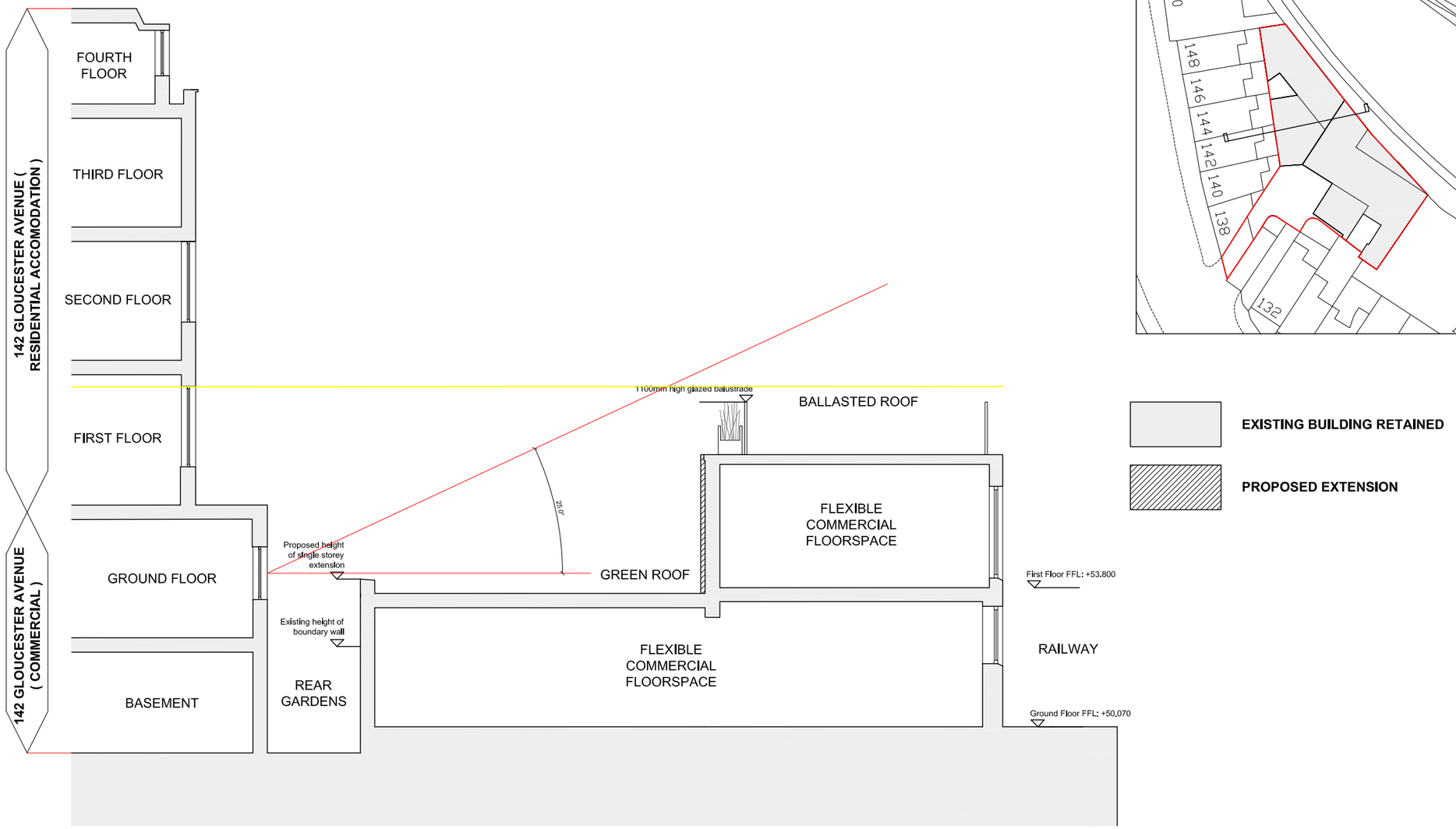

DE METZ FORBES KNIGHT ARCHITECTS
the old library 119 cholmley gardens london nw6 1aa t 020 7435 1144 f 020 7435 0884 mail info@dmfk.co.uk

date	rev	revisions
-	-	-

This model is based upon measured survey information by Laser Surveys Ltd

project
134a - 136 GLOUCESTER AVENUE

drawing title
25 DEGREE DAYLIGHTING STUDY OF PROPOSED GABLE

client	scale at A1	scale at A3	drawn	date
Starprop LLP	1.100	1.200	CJH	SEP 11
	project no.	drawing no.	revision	
	1763	DS 04	-